CLAIMS

1. A belt conveyor comprising a conveying upper run presenting a feed end and a discharge end, and a return lower run, characterized in that the conveying upper run comprises a curved extension (43), which is concave and ascending and presents an inlet lower portion (43a) and an outlet upper portion (43b), the latter ending at the discharge end (41b) of the conveying upper run (41), where the belt conveyor imparts to the material a path that is substantially coplanar and opposite in relation to that imparted to the material in the inlet portion (43a), said ascending curved path presenting a curvature so as to produce, on the material conveyed at a determined belt speed, a centrifugal force sufficient to maintain said material seated against the curved extension (43) of the conveying upper run (41), until reaching the discharge end (41b).

2. The belt conveyor according to claim 1, characterized in that the curved extension (43) presents a single radius of curvature.

3. The belt conveyor according to claim 1, characterized in that the curved extension (43) presents an upwardly decreasing radius of curvature.

4. The belt conveyor according to claim 1, characterized in that the curved extension (43) has its material support face presenting opposite marginal portions (43c), each seated on at least one respective support roller (44).

5. The belt conveyor according to any one of claims 1-5, characterized in that the conveying upper run (41) further comprises a linear extension (45) arranged immediately downstream of the feed end (41a) and ending in the inlet portion (43a) of the curved extension (43).

6. The belt conveyor according to claim 5, characterized in that the linear extension (45) presents an inclination at maximum equal to a limit slope value for a belt conveyor.

7. The belt conveyor according to claim 4, characterized in that the material support face is seated, in each respective marginal portion (43c), on a corresponding support roller (44) whose radius of curvature defines the radius of curvature of the curved extension (43).

8. The belt conveyor according to claim 4, characterized in that the material support face is seated, in each respective marginal portion (43c), on a plurality of support rollers (44).

9. A crushing unit, comprising a first belt conveyor (10) conducting bulk material (M) to a classifying screen (20) whose discharge of rejected large material feeds a crusher (30), which releases the crushed material to a feed end (41a) of the conveying upper run (41) of a second belt conveyor (40), constructed as defined in any one of the claims 1-6, having a lifted discharge end (41b) for discharging the crushed material to a feed end (10a) of the first belt conveyor (10), characterized in that the first belt conveyor (10) has a feed end (10a) positioned in a curved extension (43) of the second belt conveyor (40), the first belt conveyor (10) being vertically disposed above the second belt conveyor (40).

10. The crushing unit according to claim 9, characterized in that the first belt conveyor (10) is parallel and vertically aligned in relation to the second belt conveyor (40).

11. The crushing unit according to claim 9, characterized in that it is mounted on a vehicle chassis V.

12. The crushing unit according to claim 9, characterized in that the curved extension (43) has its material support face presenting opposite marginal portions (43c), each seated on at least one respective support roller (44).

13. The crushing unit according to claim 12, characterized in that the conveying upper run (41) further comprises a linear extension (45) arranged immediately downstream to the feed end (41a) and ending in the inlet portion (43a) of the curved extension (43).

14. The crushing unit according to claim 13, characterized in that the linear extension (45) presents an inclination at maximum equal to a limit inclination value for a belt conveyor.

15. The crushing unit according to claim 14, characterized in that the material support face is seated, in each respective marginal portion (43c), on a corresponding support roller (44), whose radius of curvature defines the radius of curvature of the curved extension (43).

16. The crushing unit according to claim 9, characterized in that the first conveyor (10) has its feed end (10a) affixed internally and eccentrically in relation to the support rollers (44).

17. The crushing unit according to claim 15, characterized in that each of the support rollers (44), which defines the radius of curvature of the curved extension (43), is mounted to a respective shaft that is externally journalled to the adjacent side of the second belt conveyor (40).

18. The crushing unit according to claim 15, characterized in that the support rollers (44) which define the radius of curvature of the curved extension (43) are mounted to a common single shaft, with the

ends external to the respective opposite sides of the second belt conveyor (40) resting on respective bearings.

19. The crushing unit according to claim 18, characterized in that the first conveyor (10) has its feed end (10a) mounted around a roll (R) disposed internally and coaxially in relation to said support rollers (44).

20. The crushing unit according to claim 19, characterized in that the roll (R) of the feed end (10a) is incorporated in a single piece to said support rollers (44).

21. The crushing unit according to claim 19, characterized in that the roll (R) of the feed end (10a) is supported on the common end of the two support rollers (44), internally to the latter.